

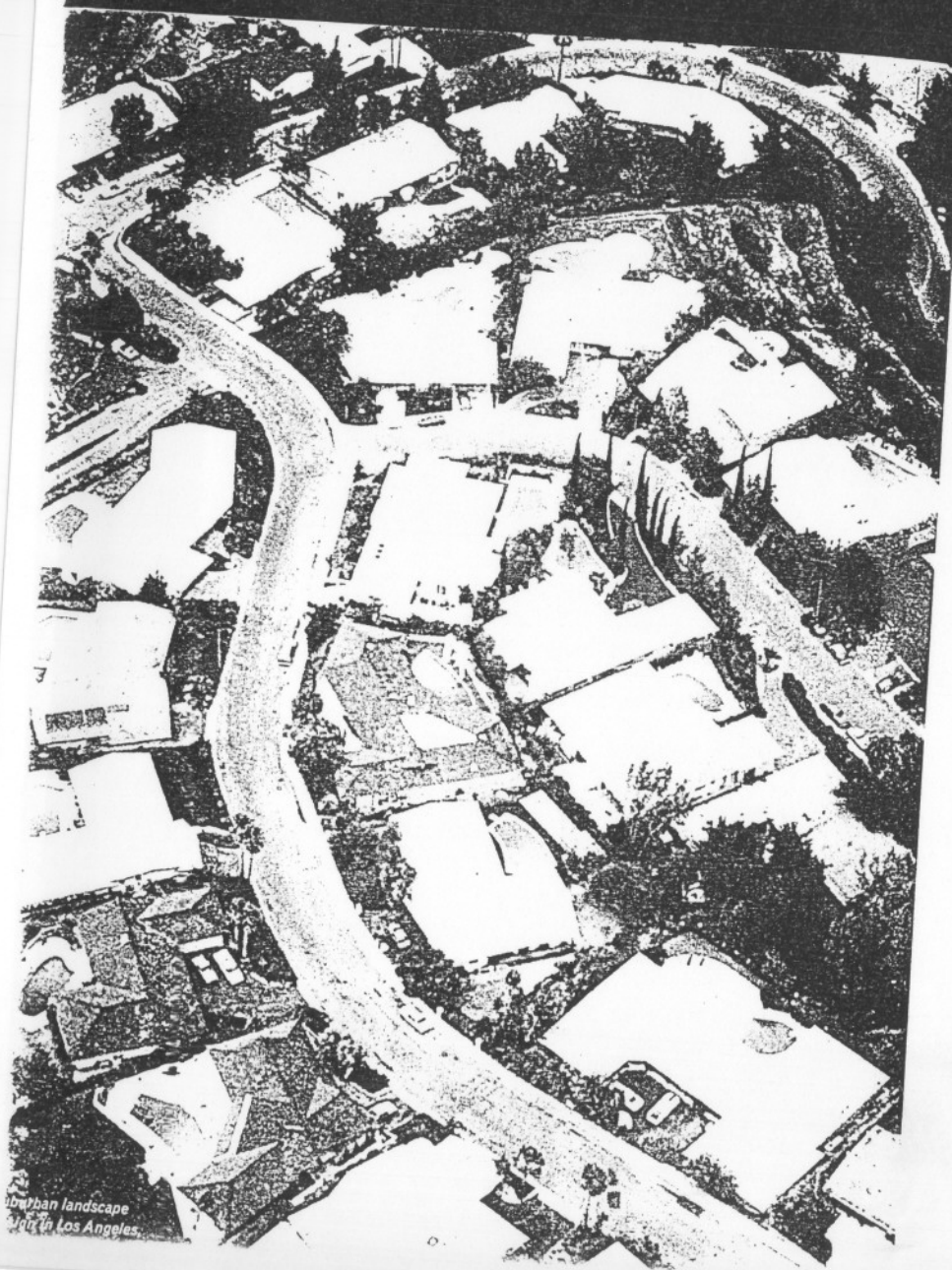
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3. Nature at Home

A Social Ecology of Postwar Landscape Design

We don't just talk and dream about our relations with the non-human world. We also actively explore them in the real places of our streets, gardens, and working landscapes. By crossing to the sunny side of the road on a winter's day, or by arranging some flowers in a vase, we both respond to and address the animals and plants, rocks and water and climate that surround us. Those working landscapes — the ordinary places of human production and settlement — are enormously complex places. Their history is in part a history of engineering — of how we build bridges, contain water, prune trees, and lay sidewalks. But it is also an aesthetic history. It is about shaping, defining, and making the world beautiful in a way that makes sense to us in the time and place that we live.

Throughout the twentieth century, landscape design ("landscaping," as opposed to landscape) has expanded into new spheres. Regional planning agencies have built new towns and reorganized entire watersheds, all of which require landscaping. In addition to traditional sites such as public parks and private estates, landscaping is now done alongside freeways and in industrial parks. We see landscaping at airports and outside restaurants and shopping centres, as well as inside buildings. Some of these sites either didn't exist before or weren't typically planted and tended by humans.

There have also been changes in the way people have come to make their domestic spaces fit their ideas of — or felt needs for — nature. In the twentieth century, millions of North Americans left rural communities and settled in cities and suburbs, disrupting their traditional physical relationship with the non-human world. They brought with them ideas of gardens, and, later,

shopping malls, community parks, and "wild gardens," people have addressed and replicated nature in other ways, developing new aesthetics in the process.

Changes in North American settlement patterns have been slow and uneven, and they have had complex social and geographical repercussions. City and country can no longer be thought of as the two poles of human settlement on the land. As agriculture was industrialized and the economy shifted its centre to the city over the course of the last century, many people abandoned rural areas, leaving whole regions of the continent both socially and economically impoverished. By the 1960s, when this trend peaked, more than two-thirds of North Americans lived within the rough boundaries of urban agglomerations. But those boundaries have gradually become indistinct. In the postwar years, regional planners directed most population growth to the new geography of the suburb, which took over rural lands on the margins of cities. By 1970 almost 40 per cent of U.S. citizens lived in the suburbs, which became, ideologically at least, the dominant land form on the continent.

Yet the next twenty years brought further changes. Many people moved back to rural areas, or to more intact examples of the small towns that were engulfed by the rapidly expanding cities of the postwar years. In the 1960s the back-to-the-land movement (only one among many in North American history) was merely one symptom of a much more systematic development that brought about an increasing interaction of urban and rural economies. Rural areas became very different places than they were two decades earlier. Agriculture, for its part, became closely (and perhaps fatally) linked with urban money markets. In legitimated scenic areas, the leisure industry — a sector that epitomizes many of these changes — propelled itself into existence through the mass marketing of raw land, recreational communities, resort condominiums, and second homes.

As the nature of the capitalist economy shifted towards information and commodity production, production was decentralized. Now, many industrial activities no longer rely on concentrated workforces or physical proximity to resources or markets. Data processing centres and small more specialized industries have parachuted themselves into forests and fields well away from metropolitan areas, giving rise to new kinds of exurban settlements that some commentators have called "technoburbs." All of these developments have intensified the reinhabitation of rural space.

These complex displacements and resettlements — and North American society in particular thinks of itself as mobile — have contributed to a jumble of landscape design styles. Predominant among those styles, however, are two aesthetic traditions, which I broadly call pastoralism and modernism. Since the 1970s those traditions have collided with pronounced regional and ecological

In recent years a great many critical and alternative landscaping practices have emerged. Some of these try to combine modernist forms with an environmentalist ethic — by using conservation and wildlife plantings, for example. Some, like urban agriculture projects, insist on integrating horticulture with local economies. "Natural landscaping" and wild gardens attempt to reintroduce indigenous land forms to horticulture and to reanimate the city. Current trends in horticulture suggest a movement away from concentrating on individual species and towards the creation of whole communities of plants, of habitat.

All of this work challenges the orthodoxies of postwar landscaping, the culture of golf courses and petrochemicals and swimming pools that many of us grew up aspiring to. In the best of this work — and there is more and more of it — we can see the re-emergence of a pre-modern relationship with nature, a relationship that is not about domination and containment. We can begin again to imagine nature as an agent of historical forces and human culture.

The Planting of the Suburb

The postwar suburb has had an enormous influence on modern landscaping practice and its aesthetic continues to influence human geographies the world over. Some of its forms — from mobile-home architecture to street layout to the choice of trees planted — have since followed urban emigrants "back" out to rural areas.

Mobility is the key to understanding contemporary landscape design, because in the last forty years planners and builders have organized most land development around the automobile. This has had enormous effects on how most of us see the landscape. It has also changed the look and feel of the land itself. The car has encouraged — indeed, insisted on — large-scale development: houses on quarter-acre lots, giant boulevards and expressways that don't welcome bicycles or pedestrians, huge stores or plazas surrounded by massive parking lots.

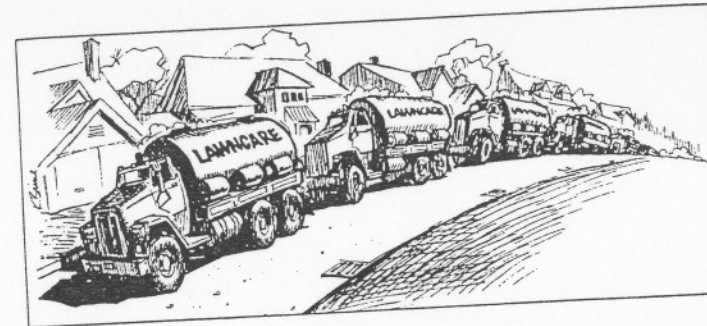
The mass building techniques practised in North America both require and promote uniformity. To build on land, property owners first have to clear and level it. Everything must go. Once they put up the structures they replant the land. Biological life is allowed to reassert itself, but it is always a life that corresponds to prevailing ideas about nature. Obviously, building contractors cannot restore the land to its former appearance — an impossible task, because they've had the topsoil removed and heavy machinery has compacted the remnant subsoils. But it is also ideologically impossible. A suburban housing development cannot pretend to look like the farm, or marsh, or forest it has replaced (and often been named after), for that would not correspond to popular ideas

on working with it. By and large, contemporary design and materials strive towards universality. Regional character, as Michael Hough points out in his book *Out of Place: Restoring Identity to the Regional Landscape*, is now a matter of choice rather than necessity. When buildings were made of local stone, wood, and clay, they had an organic relationship to the soils and plants of the region.

We can get a direct sense of these changes by considering what has been planted in the suburban landscape. First, the plantings have had to be species able to survive the harsh conditions of most North American suburbs: aridity, soil compaction, salt spray from roads, and increasingly toxic air and water. Where I live, the plants that "naturally" grow in such places are pioneer species like dandelion, sumach, tree of heaven, and brambles of various kinds — plants that, ironically, are usually considered weeds. Yet instead of recognizing the beneficial functions of these opportunistic species, university horticulture departments spent much of the 1950s and 1960s breeding properly decorous plant varieties and hybrids able to tolerate the new urban conditions. The plants had to be fast growing, adaptable to propagation in containers, and, perhaps above all, showy. By definition these requirements preclude most native North American species — for the showy very often means the exotic. Unfortunately, with so much effort put into breeding the top of the plant for appearances' sake, the resultant hybrid invariably has a shallow, weak root system, a bare base, and needs frequent pruning, fertilizing, and doses of pesticides during its short life.

Evergreens became another common feature of the suburban aesthetic. The junipers, spruces, yews, and broadleaf evergreens planted throughout the temperate regions of the continent constantly say "green" and thus evoke nature over and again. The implication is that nature is absent in the leafless winter months (or perhaps all too present), because by some oversight she does not produce green at that time of year. So evergreens are massed around the house as a corrective.

But what are the economic strategies of the culture in remaking the domestic landscape? Certainly some already existing ideas were carried over to the postwar suburbs. Many people planted fruit trees and vegetable gardens when they moved to the suburbs, and indeed, some even brought their pigs and chickens — at least until municipalities passed anti-husbandry legislation in the name of sanitation. Yet the backyard could not serve as a displaced farmyard. Too much had intervened. The suburb quickly became locked into a consumer economy in which agriculture, energy, transportation, and information were one consolidated industry. Sanitation and packaging technologies further mediated relations with the environment. So while suburban hedges and fences could



Lawns, the most prominent feature of home landscapes in North America, depend on massive doses of pesticides, synthetic fertilizers, and water.

Most of the North American suburb was built quickly in the years following the Second World War. One result of such an immense undertaking was a standardization of landscape styles. Several extant styles were drawn upon to create an aesthetic that everywhere is synonymous with modernity and that until very recently dominated landscaping practice. In its caricatured form, the most prominent feature of the modern suburban aesthetic is the lawn, in which three or four species of exotic grasses are grown together as a monoculture. Native grasses and broadleaf plants are eradicated from the lawn with herbicides, and the whole is kept neatly cropped to further discourage "invasion" by other species, a natural component of plant succession. Massive doses of pesticides, synthetic fertilizers, and water are necessary to keep the turf green.

In a perverse example of this trend, the lawn industry removed dutch clover from grass-seed mixes because the clover was incompatible with 2,4-D, a common broadleaf herbicide. Besides being drought-tolerant, clover can retrieve nitrogen from the air, making supplementary fertilizers unnecessary. The aesthetic value of the lawn is thus directly proportional to the simplicity of its ecosystem, and the magnitude of inputs. The "byproducts" of this regime are now familiar: given the intensive inputs of water and fossil fuels, there's a related output of toxins that leach into the water table.

Typically, the suburban lawn is sparsely planted with shade trees and occasionally a small ornamental tree bred to perform for its spectators: it either flowers or is variegated or somehow contorted or stunted. These species are planted to lend interest to an otherwise static composition. The house is rung with what are called foundation plantings, very often evergreen shrubs planted symmetrically or alternated with variegated or broadleafed shrubs. These are usually clipped into rounded or rectangular shapes. The driveway and garage otherwise dominate the front of the lot. A hard-surfaced area for outdoor cook-

flowers is usually at the far side of the backyard. The house's positioning on the lot has little to do with the movement of the sun or any other features of the place. The determinants of the design are more often the quantifiable ones: number of cars per family (the industry standard is 2.5 cars, plus recreational vehicles and lawnmowers), allowable lot coverage, and maximum return on investment. Such is the suburban garden as it has been planted in countless thousands of communities up, down, and across the continent.

The Persistence of Pastoralism

The lawns and trees that are so important to the postwar suburban landscape derive from the English landscape park of the eighteenth century. Lancelot ("Capability") Brown and others designed country estates in a pastoral style that was revived in the United States in the nineteenth century through the "rural cemetery" movement and later popularized by Andrew Jackson Downing, Frederick Law Olmsted, and others. Following this style, workers thinned forests and planted meadows with scattered groups of trees to create a landscape of woodland edges and openings. Sheep kept the meadows shorn, and the enclosures that had been built of hedging and walls were replaced by ha-has, sunken fences that allowed garden to recede unbroken into countryside. Some landscape gardeners even had vistas culminating in ruins — usually manufactured — of medieval abbeys or Greek temples, in this way placing a human presence in the middle ground, just as the landscape approached the wildness of the forest. These landscapes were above all idealized versions of the pastoral, and their own antecedents stretch back to the classicist painting prominent in the salons of the European continent.

But what interests me here, looking back from the very different situation of the North American postwar suburb, is how this pastoral tradition continues to have meaning today. Versions of the English park persist right through the Romantic, Victorian, and Modernist landscape work of the nineteenth and twentieth centuries, and an impoverished version of it — lawn-and-tress — is still the mainstay of contemporary municipal park work.

Pastoralism has a long history in Western culture. It promotes a view of nature as a kindly mother, a refuge from the demands of urban life. The Earth, in this view, is a garden of Eden, generous and fertile. Mother Earth provides us with food, rest, diversion, and solace. Nature in this tradition — and it is an ancient tradition, predating both science and Christianity — is an analogue of the female body. The pastoral tradition is the obverse of another Western tradition — equally primal — which understands nature as chaos and death.

Pastoralist ideas flourished during the European conquest and settlement of North America. Colonial landscape architects, such as the Englishman



Atlantic seaboard — and later, the upper St. Lawrence and the Transappalachia — as bountiful gardens, as virgin lands to be tamed and cultivated. The historical record is ambiguous on this point, however. The accounts of many Europeans suggest that North America, a continent so unlike their own, troubled and lured them in ways their dominant spiritual traditions hadn't prepared them for. Judeo-Christian civilization emerged in the inhospitable semi-arid zones of West Asia. But when that civilization encountered the Americas, whose indigenous peoples lived mutually with nature, the rush to destroy this land and its inhabitants was by no means universal. As the 1990 movie *Dances with Wolves* documented, some white people — more than our historians teach us — resisted the impending genocide. Some of them even "went native" — an inconceivable act that was interpreted by the priests and administrators of the day as kidnapping and punished with incarceration or death.

By and large, the Western pastoral tradition has been compatible with the idea of nature as a resource to be manipulated by human enterprise. Very often

The Reservoir in Frederick Law Olmsted's Central Park, New York City, in the 1960s. The pastoral landscape style promotes a view of nature as a refuge from the demands of urban life.

bride to an active male spectator. The image of the Earth as a benevolent female is an ancient anthropomorphic gesture, and one that in pre-modern societies had a normative function. Before the rise of a mechanistic world-view, for example, proscriptions against rape could be used to argue against mining. Yet as Mary Daly, Marilyn French, and other feminist historians have documented all too well, the identification of women with nature and men with culture was used to justify the emergent power of men and their machines over the land and its history. It was far easier to turn pastoralism on its head than to incorporate more marginal traditions that understood nature as a unity of male and female principles.

In any event, it is easy enough to see why pastoral traditions in landscape design have persisted in an urban industrial society. While Romantic landscaping practice tried to reintegrate the human and non-human worlds, the dynamo of modernity required a passive image of nature for the dual purposes of escape and exploitation. In our own day, this trajectory has perhaps run its course. American art critic Lucy Lippard argues that the identification of the Earth with a woman's body need not only reinforce the inferior and submissive role relegated to women in male-dominated societies like our own. It can also be an abiding source of female strength. Moreover, there is a growing feeling in North Atlantic culture that the Earth will no longer yield to human (or male) domination; that unless we reinvent pre-modern conceptions of nature, the present "environmental crisis" may be the last.

But the persistence of pastoral traditions in landscape design can't be explained only in terms of domination. The English landscape park and its North American reinterpretation are landscapes of woodland edges, a place where several plant and animal communities overlap. In temperate climates, the woodland edge — where forest and meadow meet — is the most complex and textured ecosystem of all. There the number of species is greatest, the degree of co-operation and symbiosis the most advanced. The edge is the richest feeding ground for all animals, including humans who rely on hunting and gathering. It is one of our oldest and most sacred abodes. The persistence of the English park has to do, I think, with the impulse to create and inhabit edges, the diverse and dynamic places that connect, that bind the planet together. The woodland edge is the principal model in the design of most parkway landscaping in the eastern part of this continent, for example.

In the mass-produced bungalow and ranch houses of the 1950s and 1960s, much of this impulse was brought under control or stylized beyond recognition. There, edges are not so much about diversity and interrelationship as they are

Men and Women in the Suburban Garden

In postwar North America, patterns of management and domination suffused popular culture. The pastoral lawn, for example, not only predominates in suburban frontyards, but also stretches across golf courses, corporate headquarters, farmyards, school grounds, university campuses, sod farms, and highway verges. For such enormous expanses of this continent to be brought under the exacting regime of turf management, an entire technological infrastructure had to be in place. There had to be abundant sources of petroleum and electricity to provide for an increasingly mechanized horticulture. Power mowers, clippers and edgers, weed whips, leaf blowers, sod cutters, fertilizer spreaders, and sprayers brought nature under control. Hedges and shrubbery were closely clipped. Each housing lot needed its own driveway (a large one, to accommodate the 2.5 cars). In colder climates this often necessitated the purchase of a snow plough or blower. In the 1950s, the new petrochemical industry introduced chlorinated hydrocarbon pesticides as virtual miracle products that would liquidate unwanted weeds, insects, or fungi. Popular horticultural literature reduced the soil — the very source of the ancient metaphor of the life-giving mother — to a lifeless, neutral medium that did little more than convey water-soluble fertilizers and help plants stand up. As a site of mediation between humankind and nature, the postwar garden had become technologized.

While contemporary garden chores may still be a source of pleasure, the chores themselves have changed. Many people talk fondly today about climbing onto a tractor mower and cutting an immense lawn — not unlike the way a combine harvests a field of grain. This is an activity that ends up integrating the human body into a mechanistic view of nature. The idea of the body as machine has been around since the Enlightenment and the beginnings of industrial capitalism; gardening had also begun to be mechanized by the early nineteenth century. But in postwar North American culture, a great many people became gardeners for the first time, for street trees and parks were no longer the only horticultural presence in the city. The space that surrounded the suburban tract home was of a new kind, however. It was neither the kitchen garden and barnyard familiar to women nor the rural field or urban street that was most often the domain of men.

As gardening became both less exacting and more technologized — in other words, as it came to be synonymous with turf management — it was increasingly an enterprise carried out by men. Previously, for men technics had always been confined to the workplace. The home, and the symbolic clearing in which it stood, had been thought of as a refuge from the world of alienated labour. But changes in the economy brought changes in the relationship

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called "services." As consumption, rather than production, came to dominate Western economies in the second half of the twentieth century, men often took up more exacting "hobbies" to compensate for the loss of physical labour. Care of the garden was one such hobby.

That's not to say that women stopped gardening, any more than they stopped cooking when men began to preside over the backyard barbecue. But women's presence in the garden tended to become associated even more with everything that could be generalized as "flowers": perennial borders, herb gardens, arbours and trellises, window boxes, bedding plants, and greenhouses. The landscape profession often dismisses this horticultural work (and horticulture is not a strong tradition in North America) as being too fussy or labour-intensive, when it is perhaps better thought of as evidence of a keen awareness of and interest in the other communities of the biophysical world. For women, the domestic spheres of food and sanitation had also gradually become mechanized; flower beds remained one of the few household locations not mediated by technology. Men wielded a lawnmower over the grass; women dug into the soil with a trowel.

The suburb was a new form of human settlement on the land, a new way of living. Often far from friends and kin, and "independent" of neighbours (as the suburb was supposed to be independent of city and country), the nuclear family of the 1950s clung to newly revived ideologies of togetherness. Yet the suburban form itself accentuated the feeling of absence at the centre of middle-class family life. The new houses replaced fireplace and kerosene stove with central heating, thus dissipating social experience throughout the home. A fridge full of "raidables" and supper-hour TV programs broke down the pattern of meal-times. Separate bedrooms for all or most of the children and the evolution of men's spaces like the workshop and the "yard" further encouraged rigid gender distinctions. At the same time, communal experiences within the family often became more a matter of choice than necessity. The growing independence that children felt from their parents and siblings opened up the possibility for an affective life outside the confines of the nuclear family for both men and women. These changes were as subtle as they were contradictory; many of their social implications are still not entirely clear.

The suburb stands at the centre of everything we recognize as "fifties culture." Beneath its placid aesthetic appearance, its austere modernism, we can now

glimpse the tensions of a life that for many had no precedent. Until these tensions were brought to the surface in the 1960s, the suburb was a frontier. There were no models for a family newly disrupted by commodity culture, any more than there were for garden design in a place that had never existed before. It was as if nature and our experience of it were in suspension. Things were unfamiliar in the suburb, and it's no surprise that people who could afford it fled whenever they could. Weekends and summer holidays were often spent not in the ersatz idylls of Don Mills, Levittown, or Walnut Creek, but in what was imagined to be nature itself: newly created parks and lakes and recreation areas. Here, at last, out the car window or just beyond the campsite or cottage, was an experience of nature that was somehow familiar. In fact it seems that this holiday place — and not the suburb — was nature.

But the idea of nature that was invented by postwar suburban landscaping was not a unitary one. The distinction I've made between "lawn" and "flowers" — and the parallels with gender roles — were and continue to be refuted by many people's gardening habits. Organic gardening, for example, is a very old practice that allowed many people to resist the technological incursions of the 1950s. And technology was resisted in more obvious ways, too. The mass movement against the bomb was perhaps the earliest expression on this continent of modern environmentalism.

Outside of the suburbs, in the older settled areas of the cities themselves, other forms of resistance gathered strength. The social movements whose beginnings we casually ascribe to the "sixties" — civil and human rights, feminism, peace, free speech, sexual liberation, as well as environmentalism — were in part struggles over the nature and use of urban land. Urban activism developed its own very different ideas about landscape design — ideas that are now more influential than ever.

Modernism

Another important influence in postwar landscape design was modernism. It was introduced to North America from the top, at the Graduate School of Design at Harvard in the 1930s, a time when there were fewer than two thousand landscape architects in the United States. At the time the dominant landscape tradition was "Beaux-Arts," an eclectic and ornamental school that combined axial European forms with the more Romantic and informal ideas popular in England at the turn of the century. Onto this scene Harvard graduated a number of influential graduates who took a new approach: among them Daniel Urban Kiley, James Rose, and Garrett Eckbo. As the landscape profession grew during the development boom of the postwar years, the influence of modernism grew as well, first in larger scale, public work.



A gravel garden in Albany, California, early 1980s. A severe vernacular interpretation of modernism.

Modernist design principles were derived from the art and architecture of early twentieth-century Europe, from a movement whose preoccupations were as much social and functional as aesthetic. In landscape design, this meant that the site and the client became an important part of the process: existing land forms were used to relate human beings to environment. In domestic work, the garden became an extension of the living space.

The most elite modernist tradition — which remained independent of English landscape design — brought a spare formalism to aesthetic strategies. Modern landscape work relentlessly enclosed, encoded, patterned, and abstracted nature. Thomas Church, an influential San Francisco landscape architect who championed modernism very early on, composed asymmetrical geometric patterns using walls, fences, pavings, trellises, and pools, in the process connecting garden to house. Church and other designers used plants as foils, both accentuating and blurring the lines. They massed vegetation, limited the palette, and de-emphasized bloom. Since the 1970s, U.S. modernist design has travelled back across the Atlantic. The work of John Brookes, for example, has combined modernism with an English respect for plants to produce a new garden aesthetic of great interest.

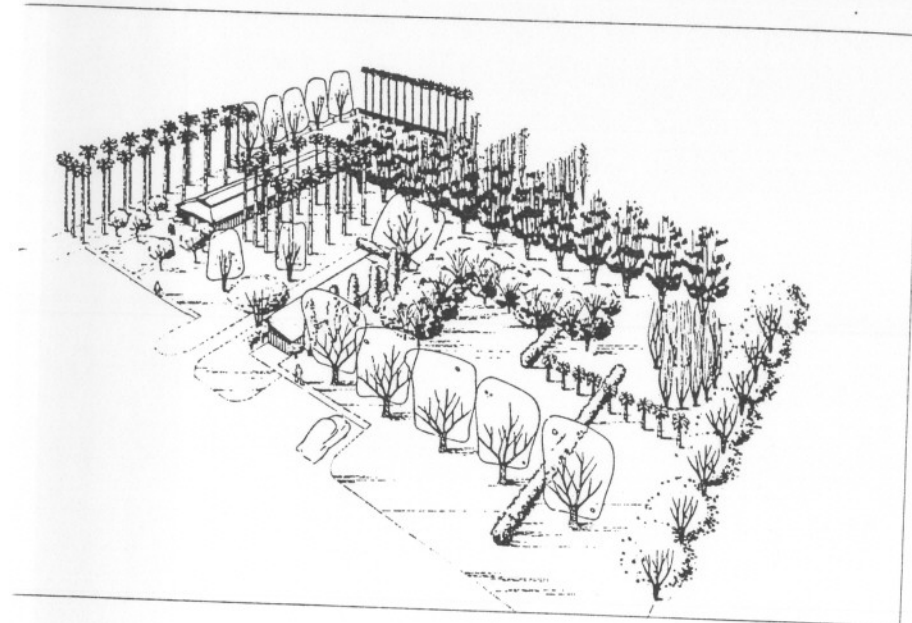
There are other crosscurrents. In the first half of the twentieth century the early beginnings of ecology in Europe influenced a number of young German, Scandinavian, and Dutch modernists. Their work, much of it public, juxtaposed organic and inorganic forms, marrying a sometimes rigid formal aesthetic with ecological principles. Many of these principles were drawn from phytosociology, the study of plant communities. In recent years this work has come to light among landscape designers in North America, who see in it a prototype of landscape work that is at once social and ecological.

North American modernism has other roots as well. It borrowed from Japanese and Moslem gardens, as well as from Latin America. Roberto Burle Marx, a Brazilian, introduced flowing biomorphic patterns into his landscape projects, which rely on complex pavings of many different materials and a sculptural use of native plants. Luis Barragán used the basic, almost primal forms of water, earth, walls, and trees in his work in and around Mexico City.

The most obvious characteristic of all this work — and I have been very selective — is its emphasis on form. But it is form as it is derived from local cultures and topographies, a sensitivity to region that often carries over to the use of native plants. The tension between modernism and regionalism, in fact, is a recurrent theme in twentieth-century landscape design. Modernist aesthetics generally have ransacked and colonized non-European cultures in a search for authentic expression. Sadly, the formulation of this “international style” — with its parallel in the standardization of building techniques and industrial processes — means that many of our built landscapes today are indistinguishable from one another.

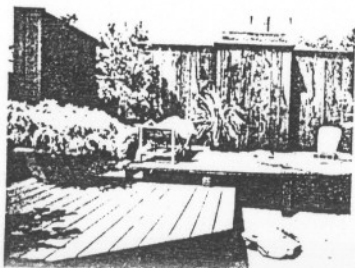
Some designers, however, have attempted to combine modernist ideals with a sense of region. In much the same way that early European modernists tried to infuse the movement with a social and ecological mission, there is a North American landscape tradition that is honest about the specific cultural, ecological, and historical circumstances of locale. In this design work, which saw a revival in the 1980s, naturalist and nativist idioms predominate. In regions with a strong self-identity, like New England, the U.S. Southwest, and the Northwest coast, it was often only a matter of learning from existing landscapes, both natural and cultural. A. E. Bye and Cornelia Hahn Oberlander have done this kind of work along, respectively, the eastern and western coasts of North America. These are exercises in abstracting nature — and here it is worth recalling that the modernist painter Wassily Kandinsky argued that the purpose of abstraction is to liberate the essential patterns and forms of nature from its chance aspects. In what is now often called a “naturalized” landscape style, designers retain mature trees and fit the house into a slope or opening using local materials. They plant meadows or fields right up to the windows and leave streams unimpounded. Their work understates, even effaces, human intervention in the natural world.

Frank Lloyd Wright based his career on the rejection of European styles in favour of an indigenous American design. Wright did much of his work in the U.S. Midwest, a region with a poorly developed sense of itself (and one that is still almost ignored in studies of the North American landscape). Wright was part of an aesthetic movement that developed a distinct prairie vocabulary for



Robert Eckbo's design for a common area in a migrant workers' camp in Imperial California, late 1940s. Eckbo managed to merge modernist aesthetics with both a social agenda and a sense of region.

The San Francisco roof garden designed by Lawrence Church, 1950s. These design strategies contributed to a hybrid California style in the postwar years.



began in the early years of this century. Its principal exponent in landscape at that time was Jens Jensen, a Danish immigrant who worked for many years as a superintendent in the Chicago parks. Jensen pioneered efforts to introduce native prairie plant communities to parks and gardens.

Garrett Eckbo was another regional modernist. His first work was with the Farm Security Administration, designing and planting camps for migrant workers in the San Joaquin valley of California. Eckbo moved to Los Angeles in the late 1940s, where he specialized in suburban residential work. In *Landscape for Living* (1950), Eckbo helped introduce ecology to landscape architecture. He understood his work — which manages to be stylish while still sensitive to elements such as microclimates — to be about “reuniting people and nature.”

But these regional and nativist impulses in landscape design have been carried out some distance from the mainstream of the landscape and architectural professions — which in turn have not had a direct influence on most of the land development that has changed this continent in the last forty years. Yet recently, those impulses have resurfaced, mostly outside of the profession, in gestures that go under names as various as natural gardening, wild gardening, habitat creation, and ecological restoration.

California and the Standardization of Horticulture

One regional garden tradition has had an influence far surpassing any other. The various styles that make up what is usually called “California” have contributed to the recent North American landscape as much as the many traditions of the English garden. The California style has co-evolved with popular architectural forms such as the shopping centre and drive-in, the freeway and roadside motel — many of them introduced in California. Pool and palm tree have become indivisible in the cultural imagination, just as California itself has come to signify everything modern and desirable.

The style has also drawn on the proximity of Californian and East Asian cultures. Japanese people have long tended the gardens of the wealthy up and down the west coast of North America, and Japanese styles as well as plants themselves have fused with both native Californian and colonial Spanish flora. The spare use of stone, the presence of water, the textural possibilities of wood and gravel: these are Japanese design strategies that have had a far-reaching (and sometimes disastrously inappropriate) influence on North American gardens. There is a similar history in plant use. Juniper and yew and false cypress, euonymus, azalea, weigela, spirea, honeysuckle, and scores of other plants in common use today all originated in the temperate forests of Japan and China. Many of them were brought to the West by the British, who first propagated them in their own botanical gardens in the eighteenth and nineteenth centuries. But

many more temperate Asian plants — especially dwarf plants — were cloned and hybridized in California nurseries in the postwar years. Junipers in particular proved to be adaptable to virtually every North American climate and along with a small number of indigenous California species have become the most common garden plants. Most importantly, these California species have been able to survive the droughty conditions of the modern city and suburb.

The diffusion of the California style was not only a matter of plant adaptability. Hollywood also did much to popularize the suburban ranch house and its exotic surroundings. Casual outdoor living, an urban geography that stressed the ease and pleasure of movement through the landscape, a countryside of immense and exhilarating vistas — these popular West Coast images continue to attract many North Americans. The images still resonate with the frontier myths that have always overlapped with the Western landscape. The presence of Californian culture in the contemporary imagination must also have much to do with its specifically coastal geography. The seacoast is an edge of another kind. The ocean is the source of all terrestrial life, and the places where it meets the continents always speak to us not only of worlds far beyond but also of our own beginnings as a species.

To understand how landscape forms became so rapidly standardized throughout the continent, we also have to consider how the landscape industry was reorganized in the postwar economy. Until the 1960s, most nurseries and seed houses were small family-owned businesses. Horticulturists propagated plant species native to their own area and grew exotic species on site, so the plants were well adapted to the local soils and climate. Open-pollinated, non-hybrid seeds were still common, and catalogues offered vegetable and flower varieties that had been in cultivation for decades, even centuries. All of this knowledge was passed on from one generation of breeders and growers to another.

Along with the postwar industrialization of agriculture and the introduction of larger machines to carry out more complicated tasks, the work of hybridization also accelerated. Agricultural petrochemicals were developed. Much of this work was done at agricultural colleges and land-grant universities in the United States and Canada, where it was well funded by corporations and governments.

At the same time North American capital was reorganizing itself. Whole new sectors of the economy were consolidated and brought into national and international markets. As small companies were bought out by large firms, locally produced goods were standardized and made into national products. Many of these changes penetrated the horticultural industry quite late. Local production of beer and plants, for instance, was able to be revived in the late 1980s precisely because it was never fully abandoned and integrated into national

markets. Nonetheless, standardization of plant propagation and distribution, as well as design work, did begin to get under way in the 1950s. By the 1970s, through aggressive marketing techniques directed at the new housing industry and the usual practices of underselling small competitors, large regional growers had driven many local nurseries out of business.

Some nurseries eliminated their propagation fields and greenhouses altogether and became "garden centres." The garden centre had an expanded retail section to accommodate the immense influx of non-horticultural, mass-produced commodities aimed at the exterior of the home: lawn and patio furniture, swimming pool accessories, bird baths, concrete or plastic animal ornaments, miniature golf sets, wheelbarrows, lawnmowers and snowblowers, barbecues. The stores had entire aisles of new pesticides. The plants sold were bought from the mechanized farms of a small number of regional growers and wholesalers and trucked into urban areas via new cross-country four-lane highways on a strictly seasonal basis. Year by year there were fewer varieties to be found. Today, garden centres — which have the largest share of the horticultural market — tend to sell a standard list of versatile plants propagated by large industrial growers in central climates. Native species have all but disappeared from the lists of these growers; they've been replaced by hybrid junipers and hollies and euonymus, and clones of a few of the less interesting European maples — including the hybrids developed to grow in the new and arid microclimates of the suburb. Where thirty years ago an average-size nursery would have offered sixty species of trees, many of them native, today a garden centre might offer ten, most of them exotic. In the seed industry, many native and traditional varieties have likewise been eliminated from catalogues, and probably lost forever.

Similar changes have been brought about by new micropropagation techniques. A minute piece of cell tissue from one plant can now be used to propagate millions of plants. But tissue culture propagation — a type of biotechnology — has had mixed results. Plants with too little "natural intelligence" — genetic and ecological information drawn from their communities — often mutate unpredictably and are vulnerable to pests. Yet industrial plant research continues, aiming to create a whole new generation of patented, privately owned and marketed plant species resistant to pesticides.

The standardization of the horticultural industry coincided with an increase in planting all over the continent, which accompanied the development booms of the last forty years. The result has been virtual plantations of single species in the parks, neighbourhoods, and shopping centres of many cities. This simplification of the ecosystem has led to both increased susceptibility to pathogens and a consequent dependence on pesticides. It is a development that is structurally integrated with modern agriculture, an industrial process that

depends on abundant and temporarily cheap petroleum and triggers a downward spiral of genetic simplification, pesticide resistance, poor nutrition and health, habitat destruction, and species extinction. To a whole new profession of landscape contractors and maintenance companies, meanwhile, horticulture has become an adjunct of housecleaning; and landscape design an endlessly repeated exercise that bears little relationship to its own bioregion.

In the last ten years or so, a number of small "post-sixties" businesses have bucked many of these trends. In every region of North America, specialized growers have begun to propagate native plants once again and to organize conferences to promote these plants to landscape architects, government agencies, and amateur gardeners. Botanical gardens have long recognized the need for local seed sources to maintain a gene pool large enough for plants to adapt to disease, insects, and climate change. Now amateur naturalists and small nurseries have also begun to collect and propagate seed from diverse communities of native plants. Clearinghouses for heritage and open-pollinated (non-hybrid) vegetable seeds have been started in Iowa and Ontario, and similar organizations are conserving old varieties of fruit and nut trees. In the Southwest United States, drought-tolerant crops such as blue corn are once again being grown in place of varieties dependent on irrigation and petrochemicals. These last developments are related to changes in Canadian and U.S. diets and, some people argue, to "hippy ethnobotany" — the introduction of plants, medicines, and foods like yoghurt, bulgur, falafel, amaranth, miso, and seaweed to North American culture. Larger businesses have also responded to these cultural changes. For example, *Sunset* magazine, which once promoted regular use of pesticides, now emphasizes integrated pest management and organic gardening.

One legacy of an industrialized horticulture has been a discontinuous and contradictory landscape. In the case of domestic gardens, people have developed a great variety of vernacular and idiosyncratic ideas about nature over the past forty years. Some public work has been innovative as well. Given its severe environmental limitations, for example, freeway landscaping has often successfully integrated urban form and natural surroundings. There are also magnificent woodland and meadow plantings along parkways in Ontario, New York, New Jersey, Connecticut, Texas, and Wisconsin. In most public or publicly visible landscape, however — at shopping centres, airports, parks, and apartment complexes — the results are less encouraging. Planners have spent little effort on integrating these projects into their urban, suburban, or rural surroundings.

In their designs for the enclosed shopping mall, designers have altogether abandoned the exterior of the complex. Inside, however, something else is

going on. In the chic upmarket malls of wealthy areas, plantings are lavish: trees ten to twenty metres tall, formal hedges, fountains, beds of massed tropicals, often in a late nineteenth-century ornamental style that had been banished by modernism. Many malls, in fact, consciously imitate glass-roofed Victorian botanical gardens. Even in the shabbiest of contemporary malls there are constant references to gardens and to nature.

That nature is so lavishly replicated within these new spaces and yet so repudiated without is telling. As new transportation and communications technologies penetrated the natural world in the 1950s, people began to experience nature as something manipulated, altered, composed by humans. As primitive landscapes have vanished from the planet, we've surrounded ourselves with our own replications of them. Plants now proliferate in places they haven't been seen in decades, if ever: bars, offices, bank-tower lobbies, and restaurants. These interior landscapes have been produced since the late 1960s, once the most intensive period of exterior suburban planting had been completed. Plant maintenance and plant leasing services now flourish in indoor horticulture.

But the cultivation of these new gardens is not only the result of an industry expanding its market but also part of the culture (and, increasingly, the economy) of environmentalism. Indeed, it is safe to say that much of the innovative work in recent landscape design has come from the grassroots — amateur gardeners, community activists, and a great many people working in the unofficial "voluntary" sector of the economy. These people have strongly influenced the way our world looks and feels. Verdant shopping malls and fern bars are only one manifestation of this change. Neighbourhood economic development, squat cities, people's parks, the urban muralist movement, neighbourhood greenhouses, food co-ops, cluster housing, "open space" and "green city" campaigns: these projects represent a radical critique of modernity and its relationship with nature.

Two phenomena deserve special attention because they have been responses to changing urban forms over the past century. Rural "intentional" communities have been around since the rise of the industrial city in the nineteenth century. These communities, sometimes called communes, which numbered about two thousand in the United States by the early 1980s, are diverse: some are farms or crofts, others ashrams, others nurseries, schools, retreats, publishing enterprises, or study centres. All represent a desire to revive community by forming a new relationship to the land. Those that work the land have repopularized long-term and sustainable land-management techniques (sometimes called permaculture); those that do not have helped reintegrate rural development.

Community gardens — also called allotment, victory, and leisure gardens



A school garden in Vancouver supplements kids' lunches and brings some life to the science curriculum. Community gardens have reintroduced agriculture to urban landscape design.

a response of local governments and philanthropists to rural starvation brought about by the slow move to "enclose" common lands and introduce modern agricultural techniques.

Where they have been permitted by municipal authorities, urban food gardens have traditionally not only fed people who might otherwise be undernourished but also performed an important ecological function by absorbing organic wastes, dissipating heat, and improving drainage and air quality. Urban agriculture is also enormously efficient, as proved by the wartime victory gardens popular in Canada and the United States. (Intensive food gardening is over a hundred times as efficient as industrial agriculture.) During the First World War, the U.S. campaign was organized by industrial conservation interests such as the American Forestry Association. By the Second World War the gardens were associated with patriotism. "Every Garden A Munitions Plant!" was the slogan on one poster.

Since the 1960s the politics of community gardens — like the politics of ecology — has shifted markedly to the left. The watershed events took place in 1969: the fight for People's Park in Berkeley and the establishment of Tent City on a parking lot in Boston. Urban geopolitics have changed. The relevant indices are industrial flight, altered demographics, a militant civil rights movement, land abandonment, demolition (which at one time went under the name of urban renewal), highway clearances, and changed residential densities. As public institutions decline, local community organizations have had to step in to initiate community gardens. Projects like these are an informal land use that lies outside

intensive urban land speculation (the longest being roughly 1750–1930) cities have *always* had gardens. They also remind us that cities, too, are habitat.

The Ecological Imperative

The suburban landscaping of the immediate postwar years is still the spatially predominant model, but it has come to mean something different today. As modernity itself is being questioned right across the culture, we experience its expressions with much more ambivalence. Consider these examples: the “no-maintenance” garden of coloured gravel that was once popular in Florida and the U.S. Southwest is on the wane. Its matrix was the Japanese-Californian work of the early 1960s, and when well done it was striking. But it turned out that no-maintenance meant that you got rid of weeds with regular doses of 2,4-D or a blast with a blow torch or flame thrower. It’s unlikely that in a culture that has been through Vietnam and the Love Canal such a regime can have quite the cachet it once did. Likewise with “growth inhibitors” that you spray on hedges so they don’t need to be clipped. These are landscaping strategies that deny change and the presence of life.

In recent years, ecological science has begun to change the way North Americans think about and work their gardens. Ideas of ecosystem and habitat have become new models for landscape work. There is new interest in native plants and wildflower gardens, in biological pest control and organic foods, as well as in planting for wildlife. These are all symptoms of a new understanding of urban land as animated, dynamic, and diverse.

These issues are now often forced into the open. Many North American cities mandate water conservation, for example. The city of Santa Barbara, California, forbids people to water their lawns with municipal water. Marin County, California, pays residents to remove their lawns and replace them with drought-tolerant plants. In many parts of the western United States, new land development is contingent on no net increase in water use, forcing communities to investigate composting toilets, the reuse of grey water (non-sewage waste water), and what is now called “xeriscaping,” water-conserving planting schemes. Sometimes these schemes mean drawing strictly from the region: cactus and rock landscapes in Arizona, for example. But they can also mean working with composites of native plants and plants from similar bioregions elsewhere. In southern California this means rejecting the tropical and subtropical plant species that have been so long associated with Los Angeles and drawing instead from the chaparral and dry woodland plant communities of the Mediterranean regions of the world: southern France, central Chile, South Africa, Australia, and of course southern California itself. All of this work gives the places we live a sense of regional integrity.



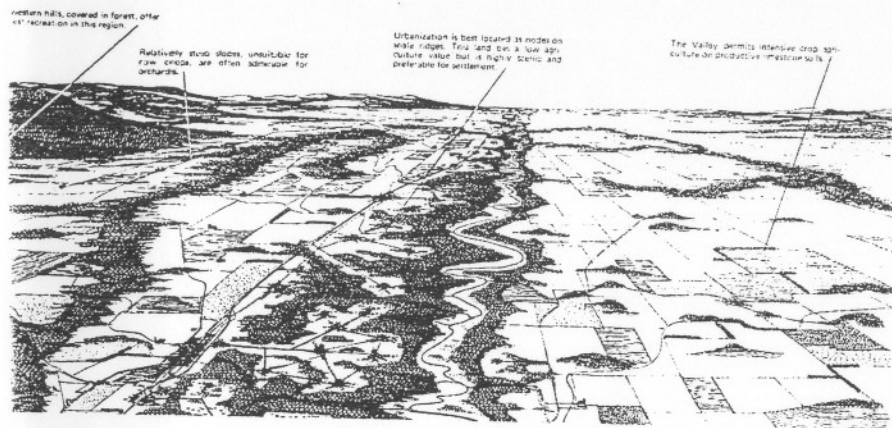
Painting dead grass in Santa Barbara, California, 1990. In arid regions of the continent, water shortages have forced people to choose between eliminating their lawns and painting them green.



A backyard in Kitchener, Ontario. Prairie ecosystems are particularly well adapted to the sunny, arid conditions of North American suburbs.

The role of ecology in landscape aesthetics is not new. In the 1920s and 1930s the new discipline of regional planning dedicated itself to the design of *whole* landscapes. Its mission is best exemplified by the work of Lewis Mumford and, later, some of the public agencies of the New Deal years. Ian McHarg, a Scottish immigrant to the United States, made the most celebrated professional intervention in 1969, with the publication of *Design With Nature*. This ambitious book, which is everywhere cited but seldom taken seriously within the land-design professions, attempted to introduce natural science to the planning process.

McHarg taught in the landscape architecture program at the University of Pennsylvania in the 1970s and 1980s. His lectures ranged across ethics and aesthetics, lurching from the advent of agriculture to Christianity, science, and space technology — all with an aim to understanding better the relations between



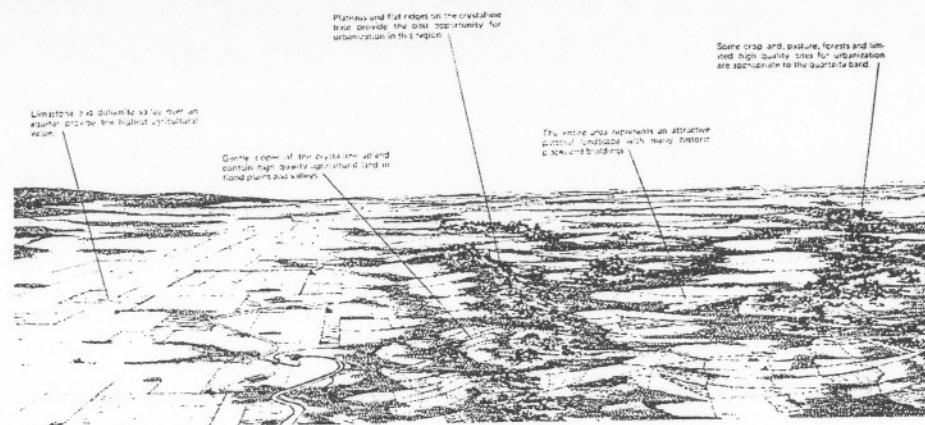
Land planning maps
from Ian McHarg's
Design With Nature, 1969.
Working on the land
of the Atlantic
seaboard, McHarg helped
produce natural
plans for the land design
process.

human settlement patterns and natural systems. The discussions anticipated many of the philosophical debates in ecology today.

McHarg's work, which has given rise to a small but influential school of ecological designers and consultants, is both descriptive and prescriptive. While the philosophical discussion in *Design With Nature* is broad and at times sloppy, the examples are instructive. For McHarg, those examples were close to home: the landforms of the Atlantic seaboard, and particularly the city of Philadelphia and its environs. McHarg provides detailed discussions of local geology, plant communities, hydrology, dune formation, soils, and topography. He places maps of these systems over one another to indicate the importance of detailed site analysis well before development.

From there his discussion moves out into the interior river valleys of east-central North America. McHarg argues for changes in settlement patterns, for design work that begins with nature — indeed, he advocates a kind of ecological determinism. Steep slopes, he notes, are unsuitable for row crops but good for secondary agriculture such as orchards, or for recreation. Cities should be kept well away from the aquifer and are best encouraged on the nodes of ridges, which have low agricultural value but high scenic value. Agriculture is best directed towards alluvial valleys, where the soils permit extensive row cropping. Using these principles McHarg fashions an aesthetic that promotes development compatible with the bioregion. This is not an anti-urban polemic. Rather it is about bringing nature into the city.

McHarg's lessons have been all but ignored within the land-design professions. A great deal of development has taken place in North America since



1969, and little of it shows an understanding of ecological principles. For its part, landscape architecture is in disrepute, having for the most part degenerated into a service industry that provides "amenities" and adornment for real estate development projects. Many land designs are undertaken by people who have never been to the site.

If the landscaping professions are in disarray, it is because they are awash in the flood of environmentalism. For better or worse, an entire generation of people now understands landscape design as applied ecology. As the idea of bioregion gains currency as an organizing strategy, Ian McHarg's work is once again relevant, this time to people working in the social movements. It offers a methodology of place, a way communities or watersheds can map their identities according to climate and landforms. "Place," McHarg writes, "is a sum of natural processes and ... these processes constitute social values."

Questions of place and values resonate differently across generations, classes, and political cultures. But some landscape work is able to galvanize both communities and professions. A promising example is ecological restoration, an emerging discipline — and movement — dedicated to restoring the Earth to health. Restoration is the literal reconstruction of natural and historic landscapes. It can mean fixing degraded river banks, replanting urban forests, creating bogs and marshes, or taking streams out of culverts. Since the early 1980s, this work — a great deal of it carried out by people working for free in their spare time — has been going on in forest, savannah, wetland, and prairie ecosystems all over North America. The Society for Ecological Restoration was founded in 1987 to co-ordinate the endeavours of its disparate practitioners: farmers, engineers, gardeners, public land managers, landscape architects, and wildlife biologists, among many others.

Restoration ecology is multidisciplinary work, drawing on technical and scientific knowledge for a generalist pursuit. It is more than tree planting or

A prescribed burn of an oak savannah in a suburban Cleveland, Ohio, park. Landscape design and management now often include the restoration of specific ecosystems.



ecosystem preservation: it is an attempt to reproduce, or at least mimic, natural systems. It is also a way of learning about those systems, a model for a sound relationship between humans and the rest of nature. Restoration projects actively investigate the history of human intervention in the world. Thus they are at once agriculture, medicine, and art. William R. Jordan of the University of Wisconsin Arboretum writes:

Watching a group of volunteers collecting seed on Curtis Prairie one fall day, I realized that they were repeating the experience of hunter-gatherers who inhabited this area centuries ago, and who actually, through their hunting, gathering and burning, had helped create the prairie communities we tended to think of as "native," "original," or "natural." At this point I realized that restoration represents a reenactment — not only of the forces that created the communities being restored in the first place, but of the entire passage of cultural evolution, from hunting and gathering through agriculture, to the analysis and synthesis of modern science. I now see restoration as providing the framework for a system of rituals by which a person in any phase of cultural evolution can achieve a harmonious relationship with a particular landscape.

These are not new ideas, but they are ideas newly current in the culture. Frederick Law Olmsted, Jens Jensen, Stan Abbott, Aldo Leopold, and others have all been part of efforts to replant and restore this continent. The recirculation of these ideas has led to some fascinating philosophical and political

debates. What is an authentic landscape? What is native, or original, or natural? These are cultural questions, and it's refreshing to see them raised within a technical — even scientific — profession.

Restoration actively seeks out places to repair the biosphere, to recreate habitat, to breach the ruptures and disconnections that agriculture and urbanization have brought to the landscape. But unlike preservationism, it is not an elegiac exercise. Rather than eulogize what industrial civilization has destroyed, restoration proposes a new environmental ethic. Its projects demonstrate that humans must intervene in nature, must garden it, participate in it. Restoration thus nurtures a new appreciation of working landscape, those places that actively figure a harmonious dwelling-in-the-world.

What we see in the landscaping work of the late twentieth century is residues of many traditions: romantic, modernist, environmentalist, pastoral, countercultural, regionalist, agrarian, and, now, restorationist. The suburban aesthetic was able to accommodate some of those traditions, but today suburbia is clearly a landscape that can no longer negotiate the tensions between city and country — much less those posed by the many people and movements already busy making new relationships with the non-human world.

Changing environmental and cultural circumstances have brought changing aesthetics. If these changes have left the landscape profession (and the landscape) in disarray, they have also allowed large numbers of people to become involved in shaping the physical world as never before. As landscaping ideas have been reinterpreted and reversed, the boundaries of the garden have become less distinct. Much recent work attempts to reintegrate country and city, suggesting that what was once nature at home may soon become nature as home.